

CAPT. H. M. SEELYE, GLOUCESTER, MASS.

Interviewed by William Wakeham, Richard Rathbun  
and Hugh M. Smith, November 21, 1893.

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Began mackerel fishing in 1870. Has not  
been fishing for 2 summers.

Mackerel, as a whole, have apparently  
decreased in abundance, but within the last 2  
years seem to be increasing back again.

Thinks the cause of the decrease is from  
killing so many with the seines.

The first few years they were in the  
business had no pockets. Would get larger  
schools of fish than we have gotten since.  
Would dress part of them and part of them  
would die; and the seines would burst and  
would kill more fish than they took. That  
trouble lasted until about 12 years ago. The  
first 7 or 8 years they started in were troubled  
with bursting seines, etc.

The way we first found the mackerel fishery

was going to the Bay hooking. That was about 1872; and they were making good year's work; and in about 1875 or 1876 commenced June seining. In those years quite a number had gone into it.

Up to 1884 the fish continued in abundance, but there has been a decrease since until last year.

If the seines were condemned, and a man was not allowed to use one, the vessels would make better catches of fish and more money. Would fish more evenly.

And another thing, the last time we had reciprocity with Canada, could get fish anywhere then, were having good hooking in the Bay, and the consequence was the vessels had good fishing on that shore with seines, but after that all the vessels dropped the Bay and came home here and went to hooking, and from that time, in the Bay, the fish seemed to leave there and come on our coast. Thinks it was

the bait they threw that held them. When they stopped throwing bait there the fish came on this shore altogether.

In about 1889 we lost the fish and they went back into the Bay, and the first 2 years there was good fishing, but after reciprocity run out the fish left the Bay and we could not find them anywhere. Then we went to the Magdalen's and went to throwing bait when we could not find any fish schooling. The bait fishermen claim that brought the fish back, and they have been catching them ever since. We used to run up on Fisherman's Bank and lay there and throw bait, and consequently it was not long before we would find fish there.

It is his opinion that if every vessel was compelled to stay on our own shore, and throw a quantity of bait, we would bring the fish on our own shore, and would not care about reciprocity or anything else. Thinks mackerel can be tolled by bait.

Mackerel feed upon small minnows and the red feed principally.

When we went hooking in the '70's would scarcely ever heave to on this Bank (Think he refers to Fisherman's Bank), and if we did would not get anything. When the vessels came up then they went to heaving bait on the bank, and the fish have been on it ever since.

The purse seine has done injury to the fish. If it was abolished entirely, in less than 5 years it would be a benefit to every man that goes fishing. Thinks, also, that it breaks up the schools.

In the southern spring fishery at times we killed twice as many fish as we took to market. That was in the beginning of seining. Undertook to put them on the market, and found it overstocked, and would have to dump them overboard. If we salted the fish taken on the southern grounds we could sell them. They would average from \$7. to \$10. a barrel

salted.

Went down then between Cape Charles and Cape Hatteras. Was down there in 1874.

They hook just as well down there in the early spring as they do at the north later in the season. Would catch a trip and be home in June to go to the Bay.

Would go down to Cape Charles about the last of April. They go now very much earlier.

In the early days of the seine fishery we would lose the most fish in June and July. Would burst the seines oftener then. That would be off Nantucket to the western part of Georges.

Thinks if they abolished the purse seines there would be more mackerel taken, on the whole, and a better chance of their increasing. If it could not be stopped entirely, no use to try to stop it at all. Would have to be stopped up to July anyway, and that would make too short a season for the purse seine.

Would not prohibit them in any one place.

Would not prohibit them in the southern waters in the spring, nor in the Gulf of St. Lawrence.

Apparently the fish must lay off on the edge of the gulf stream in the winter.

Probably do not all go as far south. The smaller fish may be far south.

The early schools, the fish come in from the edge of the gulf stream between Hatteras and Cape Charles, and work easterly; and some schools will work in and trim this shore.

Fish would be caught just as readily with hook and line as they ever were. When there were many American vessels in the Gulf that used toll bait they took fish in larger quantities. When we had an abundance of mackerel we were fishing right along, and the vessels throwing bait, all working easterly on our own shore, and in fact right down into the Bay.

This year and last year they have commenced to stay down there and throw bait, and consequently the whole of that ground is fishing ground. Wherever they throw the bait, fish come. Whether they come for that bait or for other fish that feed upon the bait, is a question.

This year they did first rate. Some men shared as high as \$600. or \$700.

Thinks very few owners from here would be in favor of abolishing the seines.

Mackerel spawn in June and July. Around Block Island in July. On the coast of Maine in July. Supposes the spawn is leaving them all the time from the 1st of June to about the middle of July. After the middle of July hardly ever see any spawn in the fish.

The close time law was passed because a few years ago when all the vessels went south they had to put the price down to nothing. Was not a cent made. They supplied New York

with mackerel and got no benefit from it, consequently there was no money in going south, and then they went to work to shut it off, as they thought it would benefit the fishery. Thinks the close season did some good. He threw away 200 barrels at two different times because he could not sell them at New York. That was in 1885.

The first 3 years he went for mackerel he went hooking, and averaged about 1,000 barrels a year. He did the best that was done by any vessel from here. After that started seining, and never did so well, but the trouble was he did not know much about the business and had a seine that was not made right.

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CAPTAINS SOL JACOBS, JOHN CHISHOLM AND JOSEPH SMITH,

GLOUCESTER, MASS. INTERVIEWED BY WILLIAM

WAKEHAM, RICHARD RATHBUN AND HUGH

M. SMITH, NOV. 21, 1893.

Capt. John Chisholm has not been fishing for mackerel for 3 years; but did engage in that fishery previously, from the time he came to this country, about 25 years ago. Is now a fishery merchant in Gloucester. Had 14 vessels this year, of which 7 went mackerel fishing.

Capt. Sol Jacobs has been mackerel fishing for 23 years. Is now captain of the Sch. "Ethel B. Jacobs".

Capt. Joseph Smith has been mackerel fishing about 25 years. Now captain of Schooner "Mabel R. Bennett", but has interests in other vessels also.

(Sol Jacobs) The farthest south he ever saw mackerel was in  $35^{\circ}$  N. latitude, about the latitude of Body Island, just north of Matteras. At the same date has seen them some 3 or 4 degrees north of that. Once saw them the 18th of March in  $33^{\circ} 11'$ . That was a number of years ago. This spring the farthest south he saw them was about Body Island.

The southern seining fishery has been going on for 18 or 19 years.

Has gone as far as  $37^{\circ} 30'$ .

Would be some variation where the schools first appeared. Does not think the fish ever go to the Gulf Stream. Thinks they occur inside of

of the Gulf Stream from off Body Island to Chincoteague. Those mackerel go north. They lay along from Body Island to Cape May for two or three months, February, March and April. Has seen fish in February at the south, at the same place, some 24 years ago, when down there in the bark "J. S. Winslow". The fishermen never go there to look for them in February.

A few straggling fish will be caught in the neighborhood of Block Island in the weirs about May 10. Mackerel do not become abundant there before June.

Then the schools go north, and the school that goes to the Cape Shore goes over and around Georges, the southeast part of Georges. Those go directly to the Cape Shore about N. and E.N.E.

Capt. Smith:-

We consider the biggest body of those mackerel go up the Straits and into the Gulf of St. Lawrence. Strike the Nova Scotia shore from Cape Sable to Scatteri. They come right in from the Gulf Stream. They strike down about a certain temperature of water and keep working east until they get pretty well down the Nova Scotia shore and

strike right in.

Capt. Jacobs:-

Has followed large bodies of fish right down N.N.E., and they struck right on the bell of the cape. They struck all the way down the Cape Shore, and never struck down Canso until two days after they struck the Cape. The main body struck first at Cape Sable. Some went up into the Bay of Fundy. Got fish on the Cape Shore four days before they got them at the Magdalens this year.

Capt. Smith:-

The heavy body of those fish come in from the southward and go in from about N.N.E. Strike well toward Sable Island and cross Western Bank.

Omnes:-

Mackerel strike the Maine coast about the 1st or 10th of June this year. That would be rather earlier than usual. The best <sup>schools</sup> fish come later than that--about the 15th to the 20th of June. Have caught them in the traps at Yarmouth as early as the 10th or 12th of May. About the 13th of May have fair fishing at Yarmouth.

The first fish that go into the Gulf go right down around Scatteri. The "Mollie Adams" followed them, and struck from the Cape Shore to North Cape, right in the fields of ice. The ice was late and the mackerel early. They go right up between Magdalens and Prince Edwards Island.

Capt. Jacobs followed them up as far as Gaspe and lost them. Does not know whether they went up on the Labrador coast or not. This summer they traced them up pretty well, and they went up on the Labrador coast. Have followed them through the Straits of Belle Isle.

The first school is much larger than the second, and comes in through the main entrance. Goes mostly the same way down the Cape Shore. Three schools go down, 3 to 5 days following each other. The second school goes around mostly as the first. The third school strikes the Cape Sable shore. There are three sizes. Some of the third school goes through the Gut of Canso, but not a large proportion. Mostly go through the main entrance. The second and third schools do not go very far north, and come out earlier than the others. This fall the 1st of November they were going by Halifax. Then the next school that comes are a

little larger. The schools around Prince Edwards Island belong to two or three schools. They go as far north as the Magdalens, and get on the main shore, on the New Brunswick shore; and some up in the Bay Chaleur. Does not think they go up on the Labrador shore.

The first school will average about 100 barrels. We caught them when they would go 117 fish to 200 pounds. They were about 16 to 21 inches long. The largest body of mackerel he ever saw was this fall about the first part of November, from Louisbourg all along the Cape Shore. The size of the second school is from 12 to 14 inches, and the third school about 11 to 13 inches.

There are a great many fish that go into the Gulf of St. Lawrence. They do not school as well there as in the Gulf of Maine, and it is not so easy to take them. They do not appear to show good when they get down there.

The reason they do not bite down there is because they have so many gill-nets; that breaks them up and scares them. Thinks that if they did not have the gill-nets down there they would school better. Gill-nets are the worst thing ever put in the water for any fisherman, whether hook and line

or anything else.

Used to get these large fish in the old days with hook and line. Used to get them on the north and south sides of Prince Edwards Island, and at the Magdalens. Larger fish at the Magdalens and north to North Cape, and at Seven Islands; and around Brine Island are some of the largest fish that are caught in the Gulf.

About 13 or 14 years ago began to follow the spring schools on the Cape Shore. Jacobs made the first trip to the Cape Shore that he knows of. He was in the schooner "Sarah M. Jacobs". The next time he went down in the "Edward Webster" and got a trip. At that time they were getting plenty of fish on our own shore; that was the reason they did not go down there, and the fleet of mackerel vessels was small. He had followed them down from Georges right down to the Cape Shore.

In the spring before last Jacobs was out about S.W. from Georges, about 90 miles south by east from South Shoal Light Ship, and those fish were going right down N.E., and he followed them right down the Cape Shore to Canso.

After the fish start to move north from the southern grounds until they reach the Cape Shore

they are moving too fast to make it possible to catch them. They are moving at the rate of five miles an hour. Sometimes they go even faster than that.

The fish coming out of the Gulf in the fall, as they pass down the Cape Shore, are only seen at nights. Do not appear in the day time, and fishing has to be carried on mostly at night.

About 10 days ago, about the 10th or 12th of November, there were some of our fleet off Canso, some off Louisburg, some off Sidney, some off North Cape and off St. Paul, and fish were seen at all of those places at the same time, and all going in large bodies. Seemed as though there were 200 miles of them. Those fish were moving by Sidney for ten days, and going by Halifax for ten days.

From Grand Manon to Cape Cod, while there may have been plenty of fish during the summer, they did not school well, and very few were taken.

This fall a large body of schooling fish were seen at the south of No-Man's Land out by Block Island. That was in July and August, all large fish. Vessels could do nothing with them, because they were going very fast. There were thousands of them southwest of South Shoal Light

Ship going to the northward in September, and the first thing we knew they turned up in Boston Bay about the first of October, from Cape Cod to Thatchers Island. All through Cape Cod Bay. Capt. Smith saw an immense body of fish at Monhegan at the same time; and they were reported at Mt. Desert Rock at the same time. Also all up along Portland. These fish were about all large fish. They staid about a fortnight. Had a northeast wind, which broke them up. They kept moving south all the time. They got them up to the 20th of October.

Also other fish were present in Massachusetts Bay subsequent to that, and were taken in the weirs at Truro as late as November 10. Some very large mackerel were taken during last night in the gill-nets in Ipswich Bay.

About November 15, Capt. McGinnis, Schr. "Landseer", saw a large body of fish S.S.E. of Boon Island, 10 or 15 miles probably, in the night.

Capt. Jacobs has caught them in Massachusetts Bay as late as the 20th of November. Capt. Smith has caught them about the same time. Capt. Chisholm has caught them as late with the hook. Caught 17 barrels in Barnstable Bay on the 17th of November. That was about 1870.

Capt. Jacobs caught some mackerel around Block Island last year as late as Christmas. Taken with the hook and line. This year they appeared to leave pretty early. Does not think there are any there now.

No southern fishery in the fall, and therefore cannot say anything about the movements of the fish after they leave this part of the coast.

Mackerel leave the coast of Nova Scotia about the 25th of November. There were larger schools this fall than he has ever seen before. As a rule, have larger schools in the fall than in the spring. Capt. Smith thinks they are in larger bodies while moving along the coast up and down than when they are practically at rest and feeding.

None of these captains have caught mackerel in the winter. Capt. Smith has known of small ones taken out of fish on the southern part of Georges, from the stomachs of codfish. They were tinker mackerel, and only an occasional one. Capt. Jacobs caught about 20 last winter down in St. Mary's Bay, Newfoundland, with the seines, with herring. That was the 2nd of December. They were about 13 inch mackerel, No. 1's. Has seen large

mackerel come ashore, and die on the beach in December on the Newfoundland shore.

They are never so good on the Newfoundland coast as they are on this shore. Never as fat.

In 1876 we went right down to the Cape Shore and caught 450 barrels, when the last school they got was about N.N.E. from Scatteri, about 25 miles. They could see the ice plainly from the deck of the vessel. All those fish were apparently benumbed, and were not going fast at all. Had been going fast previous to this. This was about the 4th of June. Lost them just short of the ice. Seemed to come up a little breeze and they sunk. Seemed to be frozen stiff.

North side of Prince Edwards Island from East Point right up to the West Cape of Prince Edwards Island, is the best fishing ground in the Bay Chaleur for mackerel, and the best feeding ground. Around the Magdalens is a good place to hook, and Bird Island is a nice place to hook. Often larger mackerel around there than anywhere in the Bay. The best hooking place in the Gulf is south from East Point.

On the Cape Shore there are not many fish

excepting as they are travelling east or west. A few summer fish of small size.

A number of good schools taken in the Bay of Fundy up to last year, but nothing this year. That is above Grand Manon in St. Mary's Bay, some seasons get some fish, but of very small size. That is on the west end of Nova Scotia, about 30 miles north of Yarmouth. In St. Marys Bay is a resting place, to some extent, for them in the summer, but not at Yarmouth.

The Gulf of Maine is supposed to be our best fishing ground during July, August and September. This year it was very good in October. Block Island is a good fishing ground. Our vessels found the best there this season of anywhere. Cape Cod Bay is a good place in October and November while fish are moving south.

This spring from the 1st to the 10th of May found mackerel about 80 miles off shore from Five Fathom Bank Light Ship, and about 120 miles from Sandy Hook.

Predaceous fish destroy more mackerel than the whole fleet of vessels. The principal fishes are the blue fish. Squid are very bad, and also

dog fish. Whales are also very destructive. Also horse mackerel, bonitos and albacores. All the large fish appear to be after the mackerel. Gamets are about the worst thing yet. Get 10 or 12 of these small mackerel out of one gamet. Pollock are just as bad as any fish. Gulls take the young fish, but not big ones. Mackerel are found in the cod fish on Georges in the summer to some extent. Pollock prefer mackerel to herring. They<sup>R</sup><sub>X</sub> small fish generally appear to go together. That is the tinkers and the larger fish go together until they get up to 12 inch mackerel, and then they mix together. The schools that pass down the Nova Scotia shore in the fall are about all large fish. Of the fish they catch on the southern coast, some are large and some small. Generally our early catch there are the largest fish. They did not take many of the small tinkers seen last spring at the south, and they have not been seen since. Only one vessel took any. Except these very small fish, the remainder were about all large fish.

Capt. Smith thinks that the number of mackerel taken by man, compared to the number killed by predaceous fish and birds is as to a drop

in a bucket of water.

In 1883 or 1884 Capt. Chisholm, coming from the Bay of Fundy, southeast from Monhegan, about 10 miles, saw a body of mackerel which was being attacked by dogfish. The mackerel were cart-wheeling, and he decided to set the purse seine about them and take what he could. The purse seine was set around both mackerel and dog fish, about 50 barrels of dog fish, and about 50 barrels of mackerel; and there were about 25 barrels of mackerel that were caught and mutilated by the dogfish, which had continued feeding upon the mackerel during the process of pursing the seine.

Capt. Jacobs, in setting for a pod of mackerel containing perhaps 10 or 12 barrels, which were chased by dog-fish, pursed about them and took the whole business in, and found that the dog-fish had about destroyed them all, so that there was no use in attempting to save any of the mackerel.

(They told several stories about the dogfish chasing mackerel in different places in Massachusetts Bay, doing much destruction to them.)

Capt. Smith says dog-fish will cart-wheel around small bodies of mackerel and feed upon them.

Probably about 50 barrels of dog-fish in one instance was observed by him, and about two barrels of mackerel.

Capt. Jacobs tells of mackerel being frightened by horse mackerel and getting up alongside the vessel and small boats for protection.

Scattering mackerel are found over very large areas in the summer season, over the mackerel grounds.

Capt. Jacobs thinks that the percentage of large mackerel is greater this year than it has been for 23 years before. Capt. Smith says the percentage of large mackerel is fully as great as ever, and that is Capt. Chisolm's opinion.

Mackerel have different kinds of feed, They feed on a little fish we call sand fleas, and another little fish that we call alleyes. The best feed is the red seed, and it is the most common, and they like it the best. The red feed will burn their stomachs pretty quickly, but the alleyes--a species of fish--will not. At the Seven Islands they feed altogether on lant. Mackerel with full stomachs will not keep as long as mackerel with empty stomachs. These alleyes are about  $1\frac{1}{2}$  inches

in length.

The big mackerel will eat their young.

- Will eat them  $4\frac{1}{2}$  to 5 inches long. Find a great many young mackerel in the old ones.

They feed on these alleyes mostly in the Bay.

This fall the mackerel on the Capt Shore were full of young mackerel, and last fall also, and this happens every year. The old mackerel will begin to feed on the young ones from the time they hatch until fall.

Mackerel do not feed at all times. Do not think they feed at night. They must be moving around to feed. They do not feed during the spawning season, for the reason that they do not have anything in them then. When the spawn is running from them, find nothing in their stomachs.

Mackerel spawn from Block Island up to Gaspe. Would begin to spawn as early as the 4th of June in the Gulf of St. Lawrence, and continue until the 1st or 10th of July, and sometimes until the 17th of July. Do not apparently spawn on the Cape Shore. Never saw small mackerel at Seven Islands during the summer. The mackerel evidently

spawn at different times in the Gulf , because when the young of one year are passing out they occur of different sizes, from 6 to 9 inches. On the American coast they probably spawn somewhat earlier.

Capt. Jacobs thinks that they spawn about the same time on the American coast that they do in the Gulf, even down to Block Island. He judges this by the fact that fish born that year are about the same size at the two places.

The fish in the same schools do not all mature at the same time(Capt. Chib<sup>h</sup>olm).

Capt . Jacobs thinks there is not much difference in the date of spawning fish in the same schools.

Get them during both day and night with spawn running out of them. It takes a fish two or three days to spawn, and it may take a week.

Fish remain about up to the surface when they are spawning, about a foot or two under water. That is Capt. Jacob's opinion. Capt. Smith thinks they go down rather deeper under water when they spawn than what Capt. Jacobs says. Mackerel in the spawning season never show at the surface of the water. Capt. Jacobs says 1 to 6 feet is as far as

they go under water. He is quite positive of this.

All the captains think there are just as many mackerel today as there ever was. In 1881-2-3-4 were years in which there was an abundance of small mackerel. They were nearly all small ones, only a very few large ones mixed with them. They see more large fish now than they did at that time. The Cape Shore fish were small those years, but were not so plenty as they have been the last 3 years.

Capt. Smith believes there should be no law to regulate the fishery. Capt. Jacobs wishes there could be a law made to regulate gill nets. Capt. Chisholm thinks gill nets are an injury to the fish if left out a week or fortnight at a stretch. Gill nets are stationary, and an obstruction to the fish. Capts. Smith and Jacobs think pound nets and weirs destroy more fish than the seines. They will destroy lots of little codfish.

Capt. Jacobs does not think the purse seine has done any injury. Capt. Smith does not think the purse seines are an injury any more than any other method of catching them. Cape Chisholm is of the same opinion.

Capt. Smith has no doubt but what the gill-

nets, pounds and purse seines, and the hook and line fishing, tend, if the ground is fished to any extent, to scatter the fish and change their course and habit, but not particularly to diminish them. Thinks the nets diminish them more than anything else. Does not see how you could regulate the purse seine fishery. *Smith*

They do not think the close season did any good. In the first place, the southern fishery was carried on at a loss, and yet a number of captains would go early and probably be fortunate enough to get a few fish, and there were thousands of dollars lost in the business one year after another, and yet we could not bear to stop it, so we got this law. Think it is the opinion of 90 per cent of the men that this experiment did not do any good. Capt. Chisholm had two vessels there last spring and caught one mackerel. Capt. Smith had 2 vessels there and got 2,000. This law was put through with the expectation that it might be of some benefit, the business having been carried on at a loss.

We have destroyed more mackerel by going down the Cape Shore this last three years, by killing those large fish which were full of spawn, than we did for the last 20 years by going south. Thinks

they do more damage by the Cape Shore fishery in the spring than they do with the southern fishery. Jacobs.

For the last 5 or 6 years small mackerel about 6 to 8 inches long have been very abundant in the Gulf of St. Lawrence, and these have not been seen the following year in either instance. These are preyed upon to a great extent by the squid, and that has been especially the case this year; more so than he has ever seen before, but also a larger number of small mackerel this year than ever before. Do not see any large quantities of two-year<sup>old</sup> mackerel which should be derived from these young ones. But a very small quantity of these two year-old mackerel have been seen, principally around Block Island. The question is whether they have been destroyed by the squid, or whether they have a place where they remain unobserved until they attain a larger size. There may be some place off shore where they are in the habit of resorting which has not yet been found out.

(On the north shore of the Gulf of St. Lawrence mackerel are only seen in occasional years. It is rather the exception than the rule to see them--Dr. Wakeham).

In the old years there were good catches made, but where there is one boat now, there were ten boats then. The pinkies would carry 10 to 14 men and the larger vessels 20 to 25 men.

Capt. Jacobs thinks that the fish which keep up the supply are those born on the American coast, not on the Cape Shore or in the Gulf. Hardly ever find very large schools in the Gulf. In the Gulf of Maine they get larger schools than elsewhere.

Most of the traps are east of Yarmouth to Cape Sable, and some around Canso, On the coast of Nova Scotia, A majority of the fish there are caught between St. Mary's and Cape Sable. The gill-nets used from Cape Sable down to Louisburg from 3 to 6 miles off shore take the large fish which pass up that shore in the spring.

Capt. Jacobs tolled a quantity of dog fish around his vessel this summer and tried to kill them with dynamite, but would not kill over a dozen. Dynamite tried on codfish showed that they would not come up to the surface from a depth of more than 7 fathoms.

Purse seines will not be used much in the Gulf of St. Lawrence inside of 16 or 17 fathoms, as the bottom is so rough the seines would be torn, and

the mackerel are not schooling fish as they are on the American coast, and when they do school they are going all over the water, and could not catch them. Never will be carried on with marked success. More been done previous to this than will ever be done again.

Capt. Smith is decidedly against any legislation that will prohibit purse seining.

CHARLES H. PEW, GLOUCESTER, MASS.

(Of the Firm of John Pew & Sons).

Interviewed by William Wakeham, Richard Rathbun  
and Hugh M. Smith, November 21, 1893.

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His business was established in 1849.

The purse seine came into use somewhere  
about 20 years ago. It developed slowly at  
first because they were used at first for  
menhaden, and then for mackerel. At that time  
when the purse seines were used for mackerel  
there was a very large fleet of vessels went  
mackereling with hook and line. Thinks in  
some years nearly 1,000 vessels were engaged  
off our shores, Maine, New Hampshire and  
Massachusetts, catching mackerel altogether  
with the hook and line. And way back when the  
business was first started, say, for example,  
in 1831, there were something like 400,000  
barrels caught off Massachusetts alone with

hook and line.

In 1890 the catch off Massachusetts was only about 19,000 barrels. There used to be periods of scarce years, but he does not think the mackerel of those years were really scarce, but thinks the vessels did not reach the proper grounds.

Around Sable Island used to be a great place for mackerel. The very largest catches of fish used to be made there. Of late years they have all left there. Does not think the mackerel are as scarce as people think they are

The vessels then were small and the crews were small, about 8 men with perhaps 2 or 3 boys was the ordinary crew. Some of the vessels now carry 22 to 24 men.

It is very lately that vessels would go mackereling the 1st of June. Usually went after the 4th of July. That used to be the time when they would leave off cod fishing and take up mackereling, but of late years they

they have caught them the latter part of March. The vessels that engaged in mackerel fishing in those days also engaged in cod fishing.

If we caught 400,000 barrels of mackerel now, do not know where we would market them. Mackerel then were a better article, however, than they are as a whole to-day.

Thinks the purse seine and pound fishery both should have restrictions. There is no one fishing for mackerel to-day, with the exception of the pounds and weirs, and they are catching them along all the time. From 150 to a higher number of barrels come up every day from the Provinces. (? ? ? ?).

Mackerel are not a prolific fish, there is no question about that. Take the coast of Norway for illustration. There is nothing used there for mackerel except the hook and line, and they have not to any great extent pursued the mackerel fishery to export to other countries. It is sold simply for local food;

and mackerel are not plenty there to-day.

One vessel went to Norway this year, and said there were a few fish there, but could not catch them.

Mackerel as a rule are surface fish.

Only go into deep waters at times when they are moving, or at spawning time.

They cannot take care of themselves as against other fish. Take the blue fish, they will take care of themselves, but mackerel are a prey for most every fish that there is.

Not being a prolific fish, and at the same time a defenceless fish, if let alone they will not increase very fast. Take all the modern appliances, nets, purse seines, pounds and traps, and they do not have a fair show. We have come to the conclusion that mackerel cannot hold their own with the modern appliances that are used to catch them.

In the old days did not begin to take fish until after the spawning season. Does not

think, as a rule, mackerel spawn in the English waters until July. In our waters they spawn a little earlier, because our waters are a little warmer. A fish that has a tendency to early fatness spawns earlier. Fish that are poor spawn late usually.

Thinks there should be concurrent action between the United States and the Dominion of Canada in regard to the purse seine fishery. He would say, have no mackerel caught either by purse seines, pounds or gill nets until the 1st of July. But it would be pretty hard to have a one-sided regulation or restriction. Pound nets have been used ever since he has had any acquaintance with fishing. Have used them all along the Nova Scotia shore and Cape Breton, and all up on the west shore, but mostly at the Magdalen's.

Not as many people are benefitted by the purse seine fishery as used to be in the old

times. For purse seine fishing they have to have all able-bodied men.

Thinks the cod fishery of more importance than the mackerel fishery.

In 1884 the catch of mackerel was nearly 400,000 barrels, and only 12,000 or 14,000 were caught in English waters.

As a rule when mackerel first strike this shore they are small. Sometimes whole schools will come on this shore year after year, and increase in size, and you can trace them year after year. The large catch in 1884 were small fish. The large fish that our vessels caught this year the first of June were undoubtedly the remnants of that big school of fish that had been traveling year after year, and they got down to a very small number and very large size.

Those fish went into the Bay; the last catch was off Sidney. Capt. Jacobs states that he followed that school of fish way up

above the Magdalen's, and in sight of Gaspe, and there they sunk and he lost them. These fish are not caught again until quite late in the fall, and they are caught almost exclusively by the nets and pounds along the Nova Scotia coast. These fish are the mother fish and are of more importance in the supply of the new schools than any other fish we have on our shores.

The loss of life is very much smaller by the modern way of fishing than it was in the old hand line fishing. Then vessels used to fish close together and when there came a gale they would go adrift and there would be a very large loss of life.

Georges Bank was a very good fishing ground for Gloucester vessels with hand lines (cod fishery, etc.). Caught what was known in the trade as Georges fish, and they were the finest and best fish to be had anywhere. Vessels did not go trawling there until about 20 years ago. Previous to that time some

years, perhaps 200 vessels would be fishing on that Bank at one time. They began to use trawls on that Bank, and to-day you cannot catch any fish there with hand lines. In 20 years' time that Bank has been destroyed as a hook and line fishing ground. Used to catch more fish on that Bank than we caught on all the other fishing grounds put together. To-day it does not pay to send vessels there hook and line fishing.

Thinks it was a shame to allow vessels to go fishing and catch those small cod down around the "Rips" off Nantucket (Supposed to be from fry planted by Fish Commission). The vessels have almost broken up that school of fish in 3 years. They fished there 3 years, and this last year there were less than before. The second year they found them they had a large number of vessels, and caught 4,000,000 pounds of them. There were quite a number of vessels there this year, but they did not do as

well. If they had left those fish and not caught them for 4 or 5 years we would have had a big supply of larger fish.

The French Government in 1850 passed a law that gave a bounty of 50 francs to each man that went fishing, and that law is in force to-day, with some few modifications. And by their law to-day every French merchant that sells fish to a foreign country, caught by Frenchmen in French vessels, and exported in French vessels to the United States receives a bounty of 10 francs on the quintal. That bounty alone amounts, in some years, to the price at which the fish are sold elsewhere. The French merchant brings his fish into the New York market; he pays a duty of 50 cents a quintal, or half a cent a pound, and he pays a freight of 25 cents a quintal, and then he receives from his Government \$1.25 bonus upon every quintal that he sells. It would make us richer than the Vanderbilts if this Govern-

ment would treat us that way. That is the way they have driven English merchants out of the business to a great extent, and they have gone into the West India markets, and now they are coming into the United States' markets.

Knows of one man who has bought 6 to 10 cargoes of them, and the quantity is increasing each year. While such regulations are in force you must give our fishermen every latitude you can possibly, so that they can hold their own. Every fisherman that receives a bounty is registered, and the Government can take those men whenever they want to. It is understood that they can take them for the navy at some future time.

Thinks the trawl line is a destructive method of fishing, but does not see how it can be given up simply because that to-day is the only way of fishing. The supply would be reduced almost to nothing if we gave up trawl

line fishing. Some vessels set 16 miles of ground line.

The measurement for the small codfish is under 22 inches. They measure it from the extended part of the nape. Measure the shortest distance. Codfish run smaller of late years. Everything above 22 inches is a large fish. The live measurement for large fish is 28 inches and over. The codfish caught around Georges are the best fish caught anywhere in the world. The next grade below 22 inches is 15 inches. From 15 to 22 inches is medium. Below 15 inches, we call them snappers. The market for barreled fish is limited to May, June, and some very few in July. Those fish are simply salted the same as all pickled fish.

After cod come from the vessel we want them to be in salt for a fortnight, and then we take them out of the butts and put them in piles about 4 feet high and then we put weights on them for perhaps one or two days, and then a

very nice dry northwest wind will cure them for the average western market. If we are going to cure them for shipping fish, we have to take 3 different days. When you come to take 85 degrees of temperature, at the larger point where the glue that is between the scales, will melt, and they become what we call burnt fish. They have a system at Halifax where they dry fish that are not pickled and salted.

During the close season thinks the mackerel increased on this coast. If there was an early close season the fishermen would follow other kinds of fishing.

There is great damage done by the nets and pounds along shore. They do not catch many mackerel along the United States coast in nets and pounds during the spring of the year, but at Nova Scotia they catch them all the time.

A great many of our fishermen think you must not put any restriction at all on the

fishery, but he cannot see how you can have fish preserved unless you do put some restriction on the catch. Take herring, mackerel and other edible fish, and the appliances we have will catch the fish, but we do not decrease the number of other fish that prey upon them.

Does not think menhaden or alewives are the natural food of the codfish. They feed upon fish that are near the bottom of the ocean,---Crabs, shrimps, etc. The principal food for cod in the northern waters to the Gulf of St. Lawrence, is the capelin.

Does not think you ever see codfish schooling on the surface on this coast. The herring is a quicker fish than the cod, and it is a very rare thing to find codfish with herring or menhaden in them. Sometimes will see them with squid in them.

Sell the large codfish for about \$5.25 a quintal and the small ones for about \$4.25, and

the snappers would be \$2. a quintal. The  
snappers are sold in the United States.

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